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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 09/744,904   | 01/31/2001  | Mamoru Takahashi     | 1155-0214P             | 8530             |
| 2292 7590 03/23/2007<br>BIRCH STEWART KOLASCH & BIRCH<br>PO BOX 747<br>FALLS CHURCH, VA 22040-0747 |             |                      | EXAMINER<br>LEE, RIP A |                  |
|  |             |                      | ART UNIT<br>1713       | PAPER NUMBER     |
| SHORTENED STATUTORY PERIOD OF RESPONSE   |             | NOTIFICATION DATE    | DELIVERY MODE          |                  |
| 3 MONTHS   |             | 03/23/2007           | ELECTRONIC             |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

## Office Action Summary

Application No.

09/744,904

Applicant(s)

TAKAHASHI ET AL.

Examiner

Rip A. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10-20,22,24-28 and 30-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-20,22,24-28 and 30-43 is/are allowed.
- 6) ☒ Claim(s) 1 and 3-8 is/are rejected.
- 7) ☒ Claim(s) 10-12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This office action follows a response filed on December 21, 2006. Claims 1 and 3-8 were amended. Claim 9 was canceled. Claims 1, 3-8, 11-20, 22, 24-28, and 30-43 are pending.

#### *Claim Rejections - 35 USC § 102 / 35 USC § 103*

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 1 and 3-8 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Malmberg *et al.* (*Macromolecules*, 1998) for the same reasons outlined in the previous office action.

Table 1 of Malmberg *et al.* (page 8450, example B5) reveals a polyethylene homopolymer having a molecular weight distribution of 2.4. The <sup>13</sup>C NMR spectrum of this polymer, shown in Figure 3, shows that peaks attributed to methyl branching are not present, or that they are below the limits of detection.<sup>1</sup> Also, the number of hexyl branches per 1000 C is less than 0.2 (page 8450). The intrinsic viscosity, although not shown, is a function of weight average molecular weight,<sup>2</sup> and for sample B5 having Mw of 120,000, intrinsic viscosity may be calculated to be 1.79.

The reference is also silent regarding the remaining properties described in instant claims 3-8, however, a reasonable basis exists to believe that the polymer also possesses these features, especially in light of the fact that the homopolymer B5 is essentially the same as that described in the parent claim. Since the PTO can not perform experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

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3. Claims 10-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
4. Claims 13-20, 22, 24-28, and 30-43 remain allowed.

### *Response to Arguments*

5. Applicant traverses the rejection of claims over Malmberg *et al.* Applicant's arguments have been considered fully, but they are not persuasive. Applicant submits that the prior art does not teach polymer having branches of length equivalent to that of hexyl or longer is not less than 0.1 per 1000 carbon atoms, as determined by  $^{13}\text{C}$  NMR spectroscopy, with the indication that Malmberg's teaching is an estimate due to experimental error. Applicant's claimed range of less than 0.1/1000 C atoms would appear to lie squarely within Malmberg's range of "a maximum [of] 0.2/1000 C atoms," regardless if the measurement is only an estimate. Following Applicant's suggestion, Malmberg's upper bound may err on the high side, putting the actual upper bound at 0.1/1000 C atoms instead, in which case, the subject matter of the instant claims would be unambiguously anticipated by the prior art. While Applicant's statements do not lack merit, clearly, arguments of counsel can not take place of evidence in the record.<sup>3</sup> Applicants have the burden of proof to establish any unobviousness differences between the claimed invention and that of the prior art. To date, there has been no display of evidence to elucidate differences between the two inventions. As such, the rejection of record has not been withdrawn.

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<sup>1</sup> Gabriel *et al.* (*Polymer*, 2002, 6383-6390); peaks attributed to methyl branching appear at 37.53, 33.24, 27.44, and 19.97 ppm.

<sup>2</sup> See Leatherman *et al.* (U.S. 4,877,679) and Bastiaansen *et al.* (U.S. 5,428,079); weight average molecular weight and intrinsic viscosity are related by the equation  $M_w = 5.37 \times 10^4 [\eta]^{1.37}$ .

<sup>3</sup> *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geisler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997).

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*Conclusion*

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

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March 14, 2007

  
DAVID W. WU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700